

Amendments To The Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A high strength non-oriented electrical steel sheet characterized by consisting essentially of, by mass %, C: 0.06% or less, Si: 2.0 to 6.5%, Mn: 0.05 to 3.0%, P: 0.30% or less, S or Se: 0.040% or less, Al: 2.50 0.005% or less, Cu: 0.6 to 8.0%, Cr: 4.5% or less, N: 0.0031 to 0.0301%, and a balance of Fe and unavoidable impurities and containing a metal phase comprised of Cu having a diameter of 0.1 μm or less in the steel sheet by means of holding the steel sheet in a heat treatment at a temperature range of 300°C to 650°C for 5 seconds or more.

2. (Currently Amended) A high strength non-oriented electrical steel sheet characterized by consisting essentially of, by mass%, C: 0.06% or less, Si: 2.0 to 6.5%, Mn: 0.05 to 3.0%, P: 0.30% or less, S or Se: 0.040% or less, Al: 2.50 0.005% or less, Cu: 0.6 to 8.0%, Cr: 4.5% or less, N: 0.0031 to 0.0301%, one or more of Nb: 8% or less, Ti: 1.0% or less, B: 0.010% or less, and Ni: 5% or less, and a balance of Fe and unavoidable impurities and containing a metal phase comprised of Cu having a diameter of 0.1 μm or less in the steel sheet by means of holding the steel sheet in a heat treatment at a temperature range of 300°C to 650°C for 5 seconds or more.

3. (Currently Amended) A high strength non-oriented electrical steel characterized by consisting essentially of, by mass%, C: 0.06% or less, Si: 2.0 to 6.5%, Mn: 0.05 to 3.0%, P: 0.30% or less, S or Se: 0.040% or less, Al: 2.50 0.005% or less, Cu: 0.6 to 8.0%, Cr: 4.5% or less, N: 0.0031 to 0.0301%, one or more of Bi, Mo, W, Sn, Sb, Mg, Ca, Ce, La, and Co in a total of 0.5% or less, and a balance of Fe and unavoidable impurities and containing a metal phase comprised of Cu having a diameter of 0.1 μm or less in the steel sheet by means of holding the steel sheet in a heat treatment at a temperature range of 300°C to 650°C for 5 seconds or more.

4. (Previously Presented) A high strength non-oriented electrical steel sheet as set forth in claim 1, wherein the number density of the metal phase comprised of Cu present in said steel is $20/\mu\text{m}^3$ or more.

5. (Previously Presented) A high strength non-oriented electrical steel sheet as set forth in claim 1, wherein said steel sheet has an average crystal grain size of 30 to 300 μm .

6. (Previously Presented) A high strength non-oriented electrical steel sheet as set forth in claim 1, wherein the steel sheet has a processed structure remaining in it.

7. (Previously Presented) A high strength non-oriented electrical steel sheet as set forth in claim 1, characterized in that the steel sheet contains a Nb carbide or nitride.

8-10. (Canceled)

11. (Previously Presented) A processed part of a high strength non-oriented electrical steel sheet as set forth in claim 1, wherein the part is heat treated after processing for a shaping step to form the processed part so that the metal phase comprised mainly of Cu present in the processed part has a number density of $20/\mu\text{m}^3$ or more.

12. (Previously Presented) A processed part of a high strength non-oriented electrical steel sheet as set forth in claim 11, wherein the metal phase has an average size of $0.1 \mu\text{m}$ or less.

13. (Previously Presented) A processed part of a high strength non-oriented electrical steel sheet as set forth in claim 11, wherein the part has an average crystal grain size of 3 to 300 μm .

14. (Previously Presented) A processed part of a high strength non-oriented electrical steel sheet as set forth in claim 11, wherein the number density of the metal phase is increased by 10-fold or more after the heat treatment.

15. (Previously Presented) A processed part of a high strength non-oriented electrical steel sheet as set forth in claim 11, wherein tensile strength of the part is increased by 30 MPa or more after the heat treatment.

16. (Previously Presented) A processed part of a high strength non-oriented electrical steel sheet as set forth in claim 11, wherein hardness of the part is increased by 1.1-fold or more after the heat treatment.

17-20. (Canceled)

21. (Previously Presented) A high strength non-oriented electrical steel sheet as set forth in claim 1, characterized by containing, by mass %, Si: 3.1 to 6.5%.

22. (New) A high strength non-oriented electrical steel sheet as set forth in claim 1, wherein said steel sheet has Mn: 0.5 to 1.2%

23. (New) A high strength non-oriented electrical steel sheet as set forth in claim 1, wherein said steel sheet has an average crystal grain size of 30 to 300 μm by means of holding the steel sheet in a heat treatment at 800°C to 1100°C or so for 20 seconds to 5 minutes or so.